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# IMPROVING NAVY AND AIR FORCE TACTICAL AIR FORCES INTEGRATION

by

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## *Preface*

I chose this topic because it has been my experience as a United States Air Force pilot that Navy and Air Force tactical air forces do not always work well together. The reasons behind this are many and varied, but it is critical that the services be able to resolve these differences in order to work together effectively. With ever decreasing budgets and the increased use of our military forces to deal with situations all around the world, the U.S. military is increasingly deployed and employed in a combined manner. It is therefore critical that our military services be able to work together better than they have in the past. For this research paper, I have chosen to explore the problem areas that I believe are the most significant. I do believe that differences in service cultures and operational necessities will always create certain levels of friction between the tactical air forces of both services, but that we should strive to minimize those frictions.

I would like to acknowledge my grateful appreciation for the assistance and guidance I have received from my Faculty Research Advisor, LCDR Don McBrayer, without whom this research paper would have been significantly more difficult to produce. I would also like to thank those individuals who also contributed greatly to the completion of this paper by allowing me to interview them – Maj. Anthony Hutfles (AFPC/DPAOY), LCDR Thomas Halley (ACSC student and F/A-18 pilot). Finally, I would like to express my appreciation to my wife Karen, and my children, Matt and Christina, for their continued patience and understanding.

## *Abstract*

Air Force and Navy tactical air forces have historically had problems integrating well. These problems have resulted in part from inter-service rivalries, interoperability problems, differences in command and control structures, and confrontational mindsets of the services due to lack of understanding and trust between them. These frictions have caused problems during many of our countries wars, resulting in a less than ideal partnership for our common defense. This study was accomplished in an attempt to highlight some areas of friction between the services and to offer recommendations on ways of addressing those frictions.

This study was accomplished using research of historical data, review of current literature, doctrinal analysis, and interviews of current aviators of both services. The emphasis was placed on the integration of the two services and how they have worked together in past combat situations. Joint doctrine and literature were reviewed to assess how they should work together versus how they do work together. Some limitations of the study were - the classification levels of some technical areas that prevented in-depth analysis, some socio-cultural aspects of the inter-service rivalries did not lend themselves to examination in this format, and little available written material on this specific subject area.

Inadequate joint training is a problem area, which may be a result of the current operations tempo in both services. Problems with interoperability of equipment,

especially data link equipment, and forces were identified as a source of friction. Navy procedures for limiting the use of essential training equipment such as chaff, flares, and radar-warning gear to only fleet assigned aircraft and those working up for sea duty was also identified as a problem. The two services different "languages" in the aviation community is a source of friction. And finally, the two services' mindsets are adversarial, not cooperative in nature.

There are several recommended methods of addressing these problems. One recommended method is to stand up permanent Joint Forces Air Component Commander (JFACC) staff organizations on each of the regional Commander In Chief's (CINC's) staffs. Second, joint exercise programs should be revised to increase the quantity of joint training, preferably including the permanent regional JFACC staffs to fully integrate the air operations system during these exercises. Third, hardware interoperability problems need to be corrected, including data link systems, which need to be designed and implemented in cooperation instead of in isolation by each service. Fourth, the two services need to agree on a common aviation "language" to reduce a source of friction and confusion. Finally, each of the services needs to make significant strides towards honoring the intent and spirit of the Joint Publications series and the Goldwaters-Nichols act, which sought to improve inter-service relations and cooperation. This mindset change needs to start at the top of each service and work down to the lowest ranking serviceman/woman serving. Once attitudes change towards the "spirit" of jointness, then all of the other changes will be enabled and will have a much greater chance of succeeding.

# Chapter 1

# Introduction

> *As a world leader, the US military establishment must function as an integrated, efficient team. Militarily, The United States must capitalize on the synergistic effects of cross-service coordination, thereby realizing the greatest possible combat effect.*
>
> —Joint Publication 1-01.1

For many years, the United States Air Force (USAF) and Navy (USN) have had a relationship that has sometimes been adversarial. This adversarial spirit has resulted from a mutual lack of understanding of the differences in the ways the two services operate, and from politically motivated competitions such as those over the military's budget. Differences between the services range from differences in hardware to differences in doctrine. The results have been a less than ideal partnership in the common defense of the United States.

## Statement of the Problem

With ever decreasing defense budgets and an increasing propensity to use military forces for "situation management" around the world, the U.S. military will be expected to operate in a highly integrated, joint manner. General John Shalikashvili, former Chairman of the Joint Chiefs of Staff, states in his introduction to Joint Publication 1 that "the enduring theme – **joint warfare is team warfare** – …that will not change."[1] The

USAF and USN in particular will be in the position to work closely together in most every conceivable future conflict. It is imperative therefore that the two services be able to operate in an integrated and joint manner to create synergies, increase combatant commanders available options, and improve America's military forces. Interoperability problems hurt both the services and ultimately undermine their shared responsibility of defense of the nation. Cultural mistrust and an adversarial relationship between the services exacerbate interoperability problems.

Our joint doctrine and operating manuals are filled with our stated policies concerning joint operations and interoperability. For example, Joint Publication 1 states that "Effectively integrated joint forces expose no weak points or seams to enemy action, while they rapidly and efficiently attack enemy weak points."[2] While this thought very effectively illustrates the importance of being able to work effectively as a joint team, these benefits cannot be reaped unless these concepts are embraced and incorporated by our senior service leaders. Joint Publication 1 states that "To help achieve our fullest combat potential, all American military leaders must integrate the concepts and values presented in this publication into the operations of the Armed Forces of the United States."[3] Regardless of what other interoperability problems exist between the two services, this change of mindset is the pivotal problem that must be fixed before any of the others can be truly addressed.

This paper, therefore, is dedicated to looking at historical examples of inter-service problems, highlighting several key problems currently facing the services, and making recommendations for correcting these problems. While it is not possible to address every problem area, some key issues that face these two services will be examined.

## Methodology

The research for this paper was conducted by a historical analysis of USAF and USN joint operations, concentrating on their ability to effectively operate together and how cultural differences affected their perceptions of each other and their working relationships. The majority of this research was conducted in the Air University library using conventional research methods, as well as a review of online sources including DTIC and papers from service school students of all levels. Current joint doctrine was examined, and it was used as the basic framework for how the two services should operate together. All of the research was focused primarily on the integration and interoperability of the two services. The opinions expressed within this paper reflect the author's opinion only and do not reflect those of the Air Force.

## Limitations of the Study

There are many varied reasons that the USAF and USN have interoperability problems, but due to the scope and purpose of this research paper, only a few key issues will be examined. Many of the hardware interoperability problems are of a technical or classified nature, and therefore are beyond the scope of this paper. Also, there are many cultural issues that, while important to the discussion of the problem, do not address the core reasons for frictions between the services. The exact origins of these cultural issues, sources of friction, and feelings of distrust between the services are difficult to pinpoint exactly, but their effects are readily visible. Finally, there are few serious written discussions of this problem, so there is little background to build upon. While the problem is a commonly acknowledged one, there is little written on the specifics of USAF and USN integration and interoperability issues.

# Definitions

## Interoperability

The Chairman of the Joint Chiefs of Staff Instruction defines interoperability as:

> The ability of the systems, units, or forces to provide services to and accept services from other systems, units, or forces, and to use the services so exchanged to enable them to operate effectively together. The conditions achieved among communications-electronics systems or items of communications-electronics equipment when information or services can be exchanged directly and satisfactorily between then and/or their users.[4]

This definition provides very broad coverage of the subject. For the purposes of this paper, the author will supplement this definition with the one used in Joint Publication 0-2 Unified Action Armed Forces, which states:

> Unified action demands maximum interoperability. The forces, units, and systems of all services must operate together effectively. This effectiveness is achieved in part through interoperability, which includes collective effort to develop and use joint doctrine and joint tactics, techniques, and procedures; the development and use of joint plans; the conduct of joint training; and a materiel development and fielding process that provides materiel that is fully compatible with and complementary to systems of all services.[5]

Because of the increasingly joint nature of the American approach to warfare, the ability of the services to operate together effectively, in both the technical and operational sense, is more important than ever. Major Peter C. Reddy states in his Air Command and Staff College research paper that "Interoperability among joint and combined forces is arguably the singular key element in this increased effectiveness."[6]

## Exchange Billet

For the purpose of this study, the term exchange billet will be used to describe aircrews from both the USAF and USN who are assigned to fly with the other service for

a normal tour of duty. These billets are for tactical type aircraft, not including the USN EA-6B Prowler, which has a combined service squadron.

## Notes

[1] Statement of General John M. Shalikashvili, former Chairman of the Joint Chiefs of Staff, in the introduction to *Joint Warfare of the Armed Forces of the United States (Joint Publication 1)*, 10 January 1995, inside front cover.

[2] Ibid., Preface, i.

[3] Ibid., Preface, i.

[4] Major Peter C. Reddy, "Joint Interoperability: Fog or Lens for Joint Vision 2010?," Research Report no. 97-0137 (Maxwell AFB, Ala.: Air Command and Staff College, 1997), 4.

[5] Joint Publication 0-2, *Unified Action Armed Forces (UNAAF)*, 24 February 1995, ix.

[6] Ibid., 2.

# Chapter 2

# Historical Perspective

> *Virtually from the start, it was clear that Air Force planners in the Black Hole and their Navy counterparts had competing visions of what airpower could accomplish and how to use it. The dispute was a matter of war-fighting philosophy. The Navy had a very different concept of war. But the dispute also revolved around tactics and weaponry.*[1]
>
> —Gordon and Trainor
> The General's War

The Air Force and Navy have a long history of inter-service rivalry and friction. In the book "Joint Air Operations" by Winnefeld and Johnson they describe the situation: "But even their most ardent advocates on occasion acknowledge that each could have done better in integrating or coordinating their efforts in the conduct of joint air operations. The differences among air services are based on the diverse missions that are the reason for their separate existence. Attempts to harness these air services in a joint endeavor are often perceived as a threat to that existence."[2] Although they are describing the air services during World War II, this mindset and these problems are virtually identical today.

Due to the longstanding nature of these conflicts, it is important to explore their historical roots in an attempt to help describe just why competing attitudes are still present today. These attitudes have been incorporated into the fabric of the individual

services, and passed on from generation to generation, ensuring that these frictions will continue on.

**World War II**

Joint air operations were not widely accomplished during World War II. The European theater was largely an Army Air Corps operation, with little Navy participation. The Pacific theater had the preponderance of Naval air assets, but there were two notable instances of joint air operations. The first was the Battle of Midway and the ensuing campaign, which are considered the first truly joint air operations.[3] The commander in the Pacific, Admiral Chester Nimitz believed that an attack on the island of Midway was imminent, so he gathered a multi-service force consisting of every available aircraft, with accompanying commanders, at Midway in an attempt to halt the Japanese conquest of the Pacific.[4] According to Winnefeld and Johnson, "Midway was a triumph of strategic command and control (getting the forces to the right place at the right time with the right orders) and a failure at the operational and tactical levels of joint air operations (coordinating the efforts of the forces once they were in place). In essence, unity of effort was accomplished by accident."[5] After many uncoordinated attacks by the assembled joint air forces, four Japanese carriers were finally sunk in a decisive battle by Navy bombers and torpedo planes. While the outcome was successful, this may have been the first real case of inter-service problems with joint air operations.

The other major example of joint air operations was the Solomons Campaign. In essence, this campaign was undertaken to capture the Solomon Islands chain in the effort to work toward Japan, and to gain control of the sea and air in this region. The chain of command, as well as the composition of operational and tactical units, was very joint in

nature. Units came from all over the Pacific Theater, and this joint command was comprised of outfits from the Army Air Corps, Navy, and Marine Corps. Winnefeld and Johnson quote the official Army Air Force historian on this subject: "The task of welding this conglomerate air force into a smoothly functioning organization was not an easy one nor was it achieved at once, but no problem proved insoluble and COMAIRSOLS represents a notable achievement in inter-service cooperation."[6] In the overall analysis, this campaign was successful because all participants, regardless of service, put operational and combat demands before service and command line priorities.[7] This may have been the first truly successful joint air operation in American history.

**Korean War**

Unfortunately, the lessons learned during the Solomons campaign were not carried over to the Korean conflict. In between the wars, the United States Air Force separated from the Army and became a new service. As it attempted to distinguish itself from the Army, and to establish tactics, doctrine, and strategy, it found itself engaged in the Korean conflict. At the same time, the Navy, Marines, and Air Force were in the process of integrating jet-powered fighters into their inventories, necessitating revisions of their service doctrines in order to accommodate these new weapons. All of the services had faced the post-war drawdown following World War II, and a large percentage of those who had learned the lessons of joint cooperation had departed the services. Needless to say, the stage was set for strong inter-service conflicts and little desire for mutual cooperation.

Winnefeld and Johnson describe the tense atmosphere that the air forces of all services operated under during this conflict: "The bitter legacy and the stark clash of

opposing doctrines in a combat setting led to three simultaneous battles. The first was the obvious one fought against the North Korean aggressor. The second pitted the air services against one another as each sought to apply the lessons it had learned in World War II and in the postwar inter-service fracas. The third was fought by the services for the ear of the theater commander, who had his own ideas about air support of the ground campaign."[8] During the conflict, the Air Force established a Joint Operation Center in order to better facilitate air operations in theater. While this helped greatly with the confusion and frictions, it generally did not alleviate the unity of command problems between the services during this conflict.

**Vietnam War**

Little was done to help smooth out joint operations between the two wars. In fact, political factors and budgetary concerns helped sharpen the edges of inter-service conflict even more. Multiple chains of command and lack of unity of effort were problems that repeated themselves from the Korean conflict. The Commander In Chief, Pacific Fleet (CINCPACFLT), who kept a very tight leash on his forces, commanded the naval air forces. The Pacific Air Forces (PACAF) commander, who felt that his command should be running the air war, controlled Air Force assets. The Commander U.S. Military Assistance Command – Vietnam (COMUSMACV) theoretically had command of all troops in Vietnam. Underneath CINCPACFLT, PACAF, and COMUSMACV were multiple layers of command, which resulted in highly convoluted chains of command and very little unity of effort. Winnefeld and Johnson write "On top of this split in authority over the employment of airpower, there existed strong doctrinal and organizational differences among the Navy, the Air Force, the Army, the Marines, and

COMUSMACV."[9] As a result, the different service commanders battled each other and COMUSMACV for control of their air assets, and over how each felt airpower should be employed in theater.

One method used for resolving these conflicts was the practice of "segregating" the services' air assets in the skies over Vietnam. The country of Vietnam was divided into six "route packages", and each service was assigned individual route packages to work in. In certain cases, the services shared route packages, but they were usually deconflicted by time. While this served to mask the command and control problems, it did nothing to address the core problems. According to Winnefeld and Johnson, "In many respects, Vietnam remains an example of centralized control at the top, and disunity below. It was as though the Korean War had resulted in unification at the theater level that stopped short at the subunified command and service component level.[10]

**Operation Desert Storm**

In the sixteen years between the Vietnam War and Operation Desert Storm, much progress was made in the services abilities to operate effectively together. The military, as well as the nation, took advantage of that time to honestly assess our experiences in Vietnam. Many of our nation's failings were brought out into the open and discussed, and the military establishment had to essentially rebuild itself and it's credibility. Many of the military leaders during Desert Storm had been young combat troops during Vietnam, and they vowed not to repeat the mistakes of their predecessors now that they were in command.

The confusing multiple lines of command and coordination that were endured during Vietnam were thrown out in favor of truly joint operations centers. The Goldwaters-

Nichols Act of 1984 directed the restructuring of the Joint Chiefs of Staff, the combatant commands, and directed the Chairman of the Joint Chiefs of Staff to develop and implement joint doctrine. The entire combat effort was placed in the hands of a single Unified Commander, with individual Component Commanders for his land, air, maritime, and special operations components. The Joint Forces Air Component Commander (JFACC) had singular and near total control of the entire air effort. As Winnefeld and Johnson state, "The authority delegated to the JFACC made it possible to integrate the air effort. Second, the effectiveness demonstrated by joint control of air operations in Desert Storm will become even more important as total U.S. air resources diminish in the future. Fourth, the three services with air forces can be coordinated in the conduct of joint operations – if there is clearly a lead service and if each of the services is demonstrable dependent on the others to provide capabilities it cannot supply, quantitatively or qualitatively."[11]

Although the joint cooperation level was significantly higher, there were still some areas of concern. According to the Gulf War Air Power Survey, "old tensions between the services over control of theater air power were not completely resolved."[12] The Survey goes on to describe how "The Marine Corps agreed to make sorties available to the JFACC…only after Marine requirements had been satisfied. The Navy would continue to control sorties it deemed necessary for fleet defense, and the Army would fly its helicopters with few constraints from the JFACC."[13] Initial war plans developed by the Checkmate planning cell called for almost total Air Force assets when planning strikes. The Chairman of the Joint Chiefs of Staff, General Colin Powell, directed Checkmate to rewrite the plans to include a significantly higher Navy and Marine Corps

participation level.[14] Events that occurred during Desert Storm had their negative effects as well. For example, the Gulf War Air Power Survey explains the problems associated with the lack of joint participation in the JFACC staff: "In Riyadh, that staff expanded to handle wartime responsibilities…with only a few liaison officers from the other services and the allies. This fact would shape the way General Horner exercised his authority as JFACC and cause some lingering suspicion among the other services."[15] Also, the Navy and the Air Force had some interoperability problems, such as the Navy's inability to use the Contingency Theater Automated Planning System to distribute the daily Air Tasking Order, which created some friction between the services.[16] Finally, problems existed with Battle Damage Assessment, current intelligence, and combined mission planning representation.[17]

The services used the Desert Shield build-up time to iron out these differences and to bring the joint aspect of the conflict under control. By the time the actual combat began, the forces arrayed against Saddam Hussein were operating a joint, synergistic, and generally effective manner. Winnefeld and Johnson describe the overall effort this way, "Often overlooked in the aftermath of the Gulf War is that unity of control in the air was exercised through what was in effect a single-service commander with a single-service staff. When more than unity of control is needed in some future conflict, a truly joint staff will be necessary."[18] While we've made great progress in the joint arena, we still have much to do in order to ensure successful joint operations in future conflicts.

## Notes

[1] Michael R. Gordon and General Bernard E.Trainor, *The General's War* (Boston, New York, Toronto, London.: Back Bay Books - Little, Brown and Company, 1995), 96-97.

[2] James A. Winnefeld and Dana J. Johnson, *Joint Air Operations. Pursuit of Unity in Command and Control 1942 – 1991* (Annapolis, MD.: Naval Institute Press, 1993, A Rand Research Study), 6-7.

[3] Ibid., 13.

[4] Ibid., 14.

[5] Ibid., 13.

[6] Ibid., 31.

[7] Ibid., 33.

[8] Ibid., 40.

[9] Ibid., 67.

[10] Ibid., 80.

[11] Ibid., 98.

[12] Gulf War Air Power Survey Summary Report, Thomas A. Keaney and Dr. Eliot A. Cohen, 1993,146.

[13] Ibid., 146.

[14] Ibid., 36.

[15] Ibid., 147.

[16] Ibid., 153.

[17] Ibid., 169.

[18] James A. Winnefeld and Dana J. Johnson, *Joint Air Operations. Pursuit of Unity in Command and Control 1942 – 1991* (Annapolis, MD.: Naval Institute Press, 1993, A Rand Research Study), 127.

# Chapter 3

# Current Problem Areas

> *Navy officials acknowledged that their decision to stay aloof from joint military operations and to command its Gulf force from the sea, instead from Riyadh, was a mistake. Soon after the war, the Navy moved its one-star representative to CENTCOM from Honolulu to Tampa.*[1]
>
> —Gordon and Trainor
> The General's War

Following Desert Storm, all of the services looked at their performances and made honest critiques of how they could have performed better. While all of the services had critiques for the management and handling of the JFACC system employed during Desert Storm, all agreed that a single unified commander who coordinated all of the air activity was a beneficial thing. The single biggest key to the success of the system was the time given to the coalition by the Iraqis during the Desert Shield build-up. This time allowed the joint and coalition forces to train together, iron out the planning process, and illuminate any weaknesses in the system before actual combat began. Since I do not believe that any future adversary will allow that kind of preparation time prior to any future conflict, it is imperative that the U.S. air forces work out those "kinks" before the next inevitable conflict arises.

A general comparison of U.S. air forces to possible future threats shows that the technology lead the U.S. has enjoyed for many years has evaporated. Many countries purchase their equipment and weapons from the Former Soviet Union, China, and

France, all of whom are manufacturing equipment that is on par with the latest U.S. systems. While U.S. forces watch their next generation of technologically superior aircraft, such as the F-22 and the Joint Strike Fighter, become mired in political infighting and budget wars, the Former Soviet Union and other countries continue to produce ever-more lethal aircraft. In many cases, the only advantage U.S. pilots enjoy over possible adversaries is their superior training. Unfortunately, though, there are some problems with current joint training.

## Joint Training

The air forces of the different services have trained jointly for many years. Following the Korean War the services began to get serious about joint training, although the exercises were generally limited in nature. Following the Vietnam experience, the services began to look for better ways to train together in order to enhance the effectiveness of that training and thus the combat capabilities of the U.S. The exercises that resulted, Red Flag, Blue Flag, Team Spirit, etc., became a way of life for U.S. aviators, and resulted in increased joint operations capabilities.[2] These exercises are outstanding tools for training warfighters in combat operations, and the U.S. military has improved its joint exercise program significantly over the years. Currently, U.S. forces participate in joint exercises ranging from Joint Air Operations Center training to traditional combat employment exercises. The new series of command and control exercises go a long way toward reducing possible frictions during combat and allowing multi-service staffs to work together in a consequence-free environment. This helps reduce inter-service tensions, and helps to dispel stereotypes by allowing service

members to work with members of the other services and to see that each service really has the combat capabilities of the U.S. in mind when working issues that arise.

But these exercises also help to illuminate problem areas that need to be addressed, such as hardware issues, doctrinal differences, and the differences in the "languages" of the different services.

**Hardware Issues**

The Air Force has traditionally had excellent equipment to work with. In fact, some experts believe that the Air Force has a fascination with its equipment that has been detrimental to its doctrinal development. While I do not agree with that argument, it is a factual statement that the Air Force has long prided itself on its technically superior equipment. It has been my experience that Air Force flying units are much better equipped on a day to day basis than their Navy or Marine counterparts. Air Force units rarely train without chaff, flares, radar warning equipment, Electronic Counter Measures pods, and other essential training tools. Most Air Force units would consider it a severe limitation if they had to train without such equipment. I believe that having this equipment ensures a higher level of training effectiveness. On almost every sortie, Air Force aircrews get to use the "real thing", and do not have to "pretend" that they are employing combat critical items such as chaff and flares.

Navy units, on the other hand, operate with a much different mindset. Because so much money is required for the operation of the their carrier fleet, they have limited money available for training tools such as chaff, flares, and radar warning equipment. Much of their equipment is rotated among fleet aircraft, dependent upon which units are working up for and participating in fleet line duty. When many units begin their work up

phase, they get equipment from other units that are returning from their line duty at sea. They will use that equipment until they return from their sea duty, then remove it from their aircraft and give it to the next unit in line for sea duty.[3] What that means is they will fly their aircraft without critical training equipment until the next time they are ready to begin working up for sea duty. That leaves significant gaps in their training programs because they have to "pretend" that they are using the equipment instead of actually using the equipment. Naval aviators suffer because of these training gaps, and their technical proficiency is negatively affected by this lack of proper training equipment.

While attending the Navy's Fighter Weapons School, I was amazed at the type of instruction being given to fleet aircrew. Navy aircrew were being taught ways of using equipment, that were not in the original design, in order to make up for the lower quality of equipment that the Navy had. I realized that the avionics of Naval aircraft were of significantly behind those of Air Force aircraft (although the Navy has made much headway recently in this area), and that Naval aviators had a much harder time employing jointly with Air Force units because of their sometimes archaic equipment. Many Naval aircraft lack videotaping equipment (that most Air Force tactical aircraft have), resulting in limited debriefing capabilities and less training value from those debriefs.

An area where the Air Force currently lags the Navy is in information dissemination to aircraft. While the Navy has used data link capability between their E-2C aircraft and their fighters for many years, the Air Force is only now building its data link systems. Different systems currently in use by both services include the F-16 Improved Data Modem (IDM), the F-15E/F/A-18 Rapid Targeting System (RTS or Goldpan), Situational Awareness Data Link (SADL), and the Joint Tactical Information Distribution System

(JTIDS).[4] All of these information management systems provide compatible weapons systems with outstanding information in the cockpit. But the problem is one of interoperability – in order for our air forces to be truly joint, they need to have compatible data link systems among the different services. It seems that every community is working on their own individual system without true regard for the system as a whole. The military as a whole needs to bring the information management situation into clearer focus, and direct joint compatibility and interoperability to the acquisition community.

**Doctrinal Issues**

Air Force Doctrine Document 1 defines doctrine as "a statement of officially sanctioned beliefs and warfighting principles that describe and guide the proper use of air and space forces in military operations."[5] It shapes the manner in which we train, equip, and sustain our forces, and is an accumulation of knowledge gained primarily from the study and analysis of experience.[6] Although these statements come from the Air Force's doctrine document, they are equally applicable to all services.

Each services' doctrine is based upon their basic functions, and is refined as time goes on to reflect lessons learned. Because each service has a different basic function, their doctrines will obviously be different. But each service also operates in an increasingly joint world, meaning that their doctrine is not created in a vacuum. Joint Publication 1 states that "Though neither policy or strategy, joint doctrine deals with the fundamental issue of how best to employ the national military power to achieve strategic ends. It goes on to state that through trust, delegation, and cooperation each service supports effective teamwork to achieve common goals.[7] Therefore, each service must strive to make joint operations part of their institutional thinking. Notice that the

concepts of trust, delegation, and cooperation are all primarily "people issues." Without the mindset of the service leaders being directly in line with the joint doctrine mindset, their institutional mindset will certainly not be in line with joint doctrine either.

A common tendency among the individual services is to misunderstand the roles and functions of the other services. Service leaders tend to become like the ancient philosopher Copernicus, who believed that the universe revolved around the Earth. They tend to get caught up in the daily struggle with issues facing their own service, sometimes losing sight of the overall picture – the common national defense. And as the service leaders' attitudes go, so goes the attitudes of their respective institutions. Perceptions, attitudes, and biases within an institution usually flow from the top down. In fact, leaders have the potential to affect the attitudes and behaviors of their organizations because people tend to watch those in leadership roles to determine what to do or not to do.[8] Therefore, it is critical for the service leaders to foster and demand more tolerant and cooperative attitudes within their respective services. An "all for one and one for all" attitude is a contagious, positive force multiplier that has been proven successful in American combat history.

In his Naval War College paper on the problems between JFACC's and Carrier Battle Groups (CVBG) when operating together, Lieutenant Commander Andrew C. Sigler, Jr. describes how institutional misunderstandings of roles and procedures led to many conflicts during USACOM's Joint Task Force Exercises (JTFEX).[9] These exercises, designed to practice and test joint operations between Air Force and Navy assets in a Joint Task Force scenario, highlighted how attitudes and misconceptions can adversely affect working relationships and trust between the two services. For example,

Air Force JFACC's were not sensitive to the need for CVBG's to have a permissive, low threat environment to operate in before being able to give significant numbers of sorties to the JFACC for offensive operations.[10] Also, Air Force JFACC's had limited understanding of the problems caused when the CVBG was given Regional Air Defense Commander duties over the maritime area. Problems arose because this changed how sorties were apportioned to the JFACC for Area Air Defense, impacting the number of Fleet Air Defense sorties the CVBG could produce, and because of the limited number of sorties a CVBG can generate due to physical launch and recovery limitations.[11] Navy CVBG commanders were uneasy due to the perceived loss of control that was associated with having to give more apportioned sorties to the JFACC than they thought necessary.[12] Also, the JFACC "centralized control" organization is opposite of the CVBG's "decentralized control" organization, causing further stress and friction.[13] The major point these JTFEX's bring out is that there is still a lack of trust and understanding among the services, which causes unneeded stress and strained working relationships. Until these attitudes are addressed, from the top down, then these stresses will remain and friction will always play a major role in joint operations.

**Language Issues**

One final area of friction between the services is in the area of "languages." Each of the services has it's own lexicon of acronyms, terms, and ways of speaking. Problems arise when each of the services call things by completely different names. Navy and Air Force pilots seem to speak different "languages" when talking about the common realm of flight.

These differences can be seen when discussing basic flight maneuvers and procedures. For example, the two services use different terms for identical parts of the airport traffic pattern. An Air Force pilot would say "Base, gear down" to tell the control tower that his/her aircraft was turning to final approach. In contrast, a Naval aviator would say "Abeam, three down and locked." In fact, notice that each of the services calls their pilots by different names; an Air Force pilot is a "pilot" while a Navy pilot is a "naval aviator." These minor examples serve to illustrate the larger point - that as long as each service can not agree on a basic "language" for the simplest of flying issues, they will have a difficult time agreeing on more complex and important issues. While there are certainly terms that are unique to each services' flying operations, having different "languages" for common operations is a glaring source of inter-service friction. I have seen problems arise during Red Flag exercises when pilots of the two services were speaking different "languages" but not realizing it until it was too late. It usually resulted in one service having to modify their "language" for the duration of that exercise, but not achieving long term resolution of the problem. If the young aviators can not agree on a common "language", then the services senior leaders certainly will not be able to agree on one either.

**Notes**

[1] Michael R. Gordon and General Bernard E.Trainor, *The General's War* (Boston, New York, Toronto, London.: Back Bay Books - Little, Brown and Company, 1995), 465-466.

[2] James A. Winnefeld and Dana J. Johnson, *Joint Air Operations. Pursuit of Unity in Command and Control 1942 – 1991* (Annapolis, MD.: Naval Institute Press, 1993, A Rand Research Study), 161.

[3] Lieutenant Commander Thomas Halley, Air Command and Staff College student, interviewed by author, 25 January 1999.

[4] Notes, Personal Working Papers, Major Edward McKinzie, subject: Existing Technology for Information to the Shooter, 1 July 1998.

## Notes

[5] Air Force Doctrine Document 1 (AFDD-1), *Air Force Basic Doctrine,* September 1997.

[6] Ibid., 1.

[7] Joint Publication 1, *Joint Warfare of the Armed Forces of the United States*, 10 January 1995, vii.

[8] Richard L. Hughes, Robert C. Ginnett, and Gordon J. Curphy, *Leadership – Enhancing the Lessons of Experience* (Burr Ridge, IL.: Richard D. Irwin Inc., 1993), 110.

[9] Lieutenant Commander Andrew C. Sigler Jr., "The Joint Force Air Component Commander, Carrier Battlegroup, And Fleet Air Defense: Ingredients For Incompatibility During The Joint Task Force Exercise," Research Report (Newport, R.I.: Naval War College, 1996), 1.

[10] Ibid., 8.

[11] Ibid., 9.

[12] Ibid., 15.

[13] Ibid., 16.

# Chapter 4

# Recommendations

> *The area where the U.S. and its coalition partners benefited most was the realistic joint training exercises between the services and our allies. Desert Storm will be the prototype for future conflict.*[1]
>
> —Commander Daniel L. Donovan III
> Integrating Naval Air Power Under the JFACC

Despite problems between the services and some deficiencies in joint training, the overall climate has improved significantly since the Vietnam War. In recent years, the Joint Chiefs of Staff have pioneered methods to improve joint operations. The result has been the outstanding series of Joint Publications developed for our warfighters, aimed specifically at our senior leaders, which give critical guidance and philosophy for the joint military team. The Joint Publications series covers subjects ranging from basic Joint Doctrine, to the Unified Action Armed Forces (UNAAF).

These publications provide an excellent foundation for the modern warfighter to build a baseline of information to be used during joint operations. These publications are not guidance per se, but give the philosophical and doctrinal foundation that the warfighter can use to develop guidance for the joint team. In addition to these excellent publications, improvements need to be made in the area of joint staff architecture, and in joint training to include hardware, commonality of language, and service mindsets.

## Joint Staff Architecture

With the modern trend towards jointness, integration, and heavy reliance on air operations to prepare the battlefield, I believe that there needs to be an additional organization within the joint structure. The Joint Forces Warfighting Center (JFWC) at Ft. Monroe is currently the military's "schoolhouse" for joint warfare and simulation. They train thousands of our military people each year in the intricacies of joint warfare and simulation. When they train JFACC's they do an outstanding job, to include mentoring the trainee's with former senior leaders.[2] But unless these trainees have the opportunity to actually be a JFACC, then some of that valuable training will be lost. I propose the formation of standing JFACC staffs, permanently staffed by members of the four services. These permanent JFACC staffs will be the military's corporate memory and institutional experts on the operation of the JFACC staff and the conduct of air operations. They will be staffed by only the essential core elements needed to maintain their operations, and completely staffed during actual operations or during exercises.

These JFACC staffs would be permanently assigned to the five Combatant Commanders (CINC) with geographic area responsibilities (AOR). Each JFACC would be the senior air warfighter in that AOR, reporting directly to the CINC, and tasked with the maintenance of the JFACC staff. By participating in exercises (such as the "Flag" exercises as well as theater exercises and JFACC afloat training) as a fully functioning staff, utilizing joint forces in these exercises, these JFACC staffs could maintain their skills and prepare for real world operations regularly. The permanent nature of the JFACC staff would build trust, confidence, and unity among the staffs as well as the services themselves.

## Joint Training Recommendations

The services already have the best joint training opportunities in the world. Participation in Flag exercises is routinely joint, as well as multi-national, and the services try hard to work better together. There are training issues, however, that have room for improvement.

Current levels of operations tempo are so high that many squadrons of both services decline the opportunity to participate in some of the joint exercises available. For example, "Roving Sands" is a joint exercise conducted in the southwest U.S. to train and develop command and control (C2) forces and concepts, as well as integrated air defense system (IADS) forces. Because the focus is on the C2 and IADS systems, many flying units elect not to participate in the exercise, thereby losing the opportunity to learn more about C2 operations, which will ultimately affect them in real world operations. These units are so heavily committed to real world operations that they must be selective in their non-real world deployments and exercise participation. The end result is that many exercises, such as the Roving Sands exercises, lose valuable joint training opportunities.

Each service has it's own primary exercise that it accepts as being the prime exercise of that service. The Air Force has the Red Flag/Green Flag exercises at Nellis AFB throughout the year that, while they are indeed joint exercises, are primarily run by the Air Force using Air Force rules and procedures. The Navy has it's own program at NAS Fallon, which is primarily a Navy operation using Navy rules and procedures. I recommend that the services operate and conduct a joint training exercise, on the same level with the Red Flag and Fallon exercises, that combines all of the facets of air operations into a single "Air Operations Academy." This exercise should take

components of other individual exercises, as well as permanent JFACC staffs to run the air war, and combine then into a truly joint, true warfighting exercise. Every individual air operations component of a real world Joint Task Force, from the JFACC on down to the Bomb Damage Assessment personnel should exercise together to simulate the entire working system at once. Exercising different components of the system at different times generally results in the entire system having difficulty operating when it is thrown together for real. Operation Desert Storm is proof of this concept, despite all of the successes the U.S. military enjoyed there. In his review of air operations during Desert Storm shortly after the war, Commander Daniel L. Donovan, III stated that "Command and control was a monumental task that was handled with a high degree of cooperation, but not without difficulties. The services must participate in joint exercises throughout their entire training cycles. The successful conduct of future joint operations may depend on the integration of air power as much as Desert Storm did."[3]

The current direction our services are taking is the extensive use of Battlelabs and simulation to replicate every aspect of the air operation. But what these Battlelabs can not simulate is the friction encountered, and the difficulties associated with, putting the entire system together at once, each sub-system related to and dependent upon all of the other sub-systems for the entire system to operate properly. Future adversaries will probably not allow us to build up and train for six months prior to the start of hostilities, as was the case in Desert Shield. Therefore, we should have our own "Desert Shields" on a regular basis to ensure that we are ready to go when called upon in future conflicts. The training going on at the JFWC do not go far enough towards testing the entire system together.

## Hardware Recommendations

The disparity between the equipment used by the Navy and Air Force needs to be addressed. Modernization of the Navy's aircraft fleet needs to be a high priority item in their near-term agenda. The avionics of older aircraft such as the F-14 and older versions of the F/A-18 need significant improvement. Current efforts at modernization of these platforms will still leave a qualitative gap between Navy and Air Force tactical aircraft. These gaps must be addressed if Navy aircraft are to maintain technological parity with currently produced threat aircraft.

It is vitally important that the services combine their respective information distribution technologies (i.e. datalink systems) into more joint interoperable platforms. While a single system to cover all uses will probably not be feasible, greater interoperability must be achieved if the services are to operate effectively in the joint arena. The ability to share information among all platforms will be a true force multiplier, and as long as this technology is being developed anyway, why not make it truly interoperable?

And finally, Naval aviators need to have all of their equipment available to train with on a daily basis if they are to maintain their advantage over their adversaries. When those aviators are deprived of essential combat training tools, such as chaff, flares, radar warning gear, and Electronic Counter Measures pods, in their daily shore duty flying, they are deprived of valuable training opportunities. They lose critical combat skills and habit patterns through lack of use. The Navy must make it a priority for their aviators to be able to maximize the training on every hop they fly.

## "Language" Recommendations

All military aircrew need to be able to understand each other if they are to operate effectively on the joint team. Using different "languages" and terminology creates unneeded stress and confusion, and ultimately adds to the "us versus them" mentality that often pervades the different services. I recommend adopting a common "language" and set of terminology that all of the services should use. Obviously, each service will have it's own distinct jargon for things that are peculiar to that service, but an Air Force pilot, for example, should not have to try to figure out what exactly the tower controller at a Naval Air Station means when they say the word "duty" to him/her (in Naval terminology, the active runway is called the "duty"). Reducing basic differences such as communications barriers will go a long way towards improving inter-service cooperation and understanding.

## Service Mindsets

Changing the mindsets of the members of each of the services will be a challenge. Improving the way we train and communicate will have positive effects on the mindsets of each service towards each other. We must build our faith in each other, and learn to trust that the other service has the greater good of the nation's defense in mind. What is so frustrating is that our Joint Publications series "talk a good game", but in the real world service parochialism and mistrust are often the norm.

One way of improving trust and understanding is through the exchange billet program. Air Force and Navy aviators participate in this program by accepting a regular three-year assignment to fly with the other service. This allows aviators to not only fly with the other services, but to get to know how and why they do business the way they

do. Unfortunately, there are not enough exchange billets to really educate a large number of aviators about their sister services. Table 1 below shows the breakdown of how many aviators are on exchange with the other service.

**Table 1. Inter-Service Exchange Billets**

| | USAF to USN Authorized/Assigned | USN to USAF Authorized/Assigned | USAF to USMC Authorized/Assigned | USMC to USAF Authorized/Assigned |
|---|---|---|---|---|
| Pilot | 17/10 | 19/16 | 6/4 | 6/4 |
| Navigator | 7/5 | 5/1 | N/A | N/A |
| Total | 24/15 | 24/17 | 6/4 | 6/4 |

**Source:** Air Force Personnel Center, AFPC/DPAOY, November 1998.

The table illustrates just how few exchange billets there are, with even fewer being filled. In order to build the trust and team attitude, tomorrow's leaders need to be able to fly with and interact with their other service counterparts with much greater frequency than we currently have. Exchange billets should be increased to allow more aviators to fly with other services and broaden their horizons. The end result will be increased cooperative attitudes among the services and a more effective joint team.

The mindset change will be simultaneously the most difficult and most beneficial change the services can accomplish. All of the other recommended changes will help foster a more cooperative mindset, but those changes can not occur until our leaders adopt a new mindset.

## Notes

[1] Commander Daniel L. Donovan III, "Integrating Naval Air Power Under the JFACC: Desert Shield/Storm From the Red Sea," Research Report (Newport R.I.: Naval War College, 1992), 20.

[2] Brigadier General Morehouse, Deputy Commander, Joint Warfighting Center, "Joint Warfare," lecture, Air Command and Staff College, 20 January 1998.

[3] Commander Daniel L. Donovan III, "Integrating Naval Air Power Under the JFACC: Desert Shield/Storm From the Red Sea," Research Report (Newport R.I.: Naval War College, 1992), ii, 20, 21, 22.

# Chapter 5

# Conclusions

> *Separate ground, sea, and air warfare is gone forever. If ever again we should be involved in war, we will fight it in all elements, with all services, as one single concerted effort.*[1]
>
> —Dwight D. Eisenhower

It is imperative that the Air Force and Navy be able to work together effectively, in a joint team, if we are to dominate any future adversary. Our air forces, melded together into the most lethal and feared combat team in the world, should be enough to deter any possible aggressors in the future. But if someone chooses to engage the U.S. in hostilities, our air team must be able to operate together, synergistically and effectively, to bring a quick and decisive conclusion to those hostilities.

Service parochialism and mistrust must be extinguished from our military if we are to reap the maximum benefits from our leaner forces. The American public demands that we be the most capable fighting force in the world. Our history proves that, despite our differences and problems, our air forces will rise to the challenge and overcome any adversary. But we must also learn from our history and mistakes, and make changes for the improvement of our forces and our service relationships.

We must stand up and exercise JFACC staffs in order to maximize the training offered by USACOM's JFWC. We must create a better, more efficient, and useful joint training program that allows the two air forces to train together - utilizing the entire

JFACC concept as it would be used in actual conflict. The services need to improve their equipment in order to maximize interoperability, as well as their daily training. The two services need to agree on and use a common "language" in order to reduce barriers to effective communication. And finally, the services need to change their mindsets from adversarial to cooperative.

All of these recommendations will improve the inter-service relationships, and will ultimately increase their combat effectiveness.

## Notes

[1] Quoted in *The Joint Staff Officer's Guide 1997,* AFSC PUB 1, xi.

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